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     (FILE 'USPAT' ENTERED AT 12:05:39 ON 24 JUN 94)
L1           41 S (CCD OR CHARGE(W)COUPLED(W)DEVICE?)(15A)SCINTILLAT?
L2            3 S L1 AND 250/370.11/CCLS
L3            6 S L1 AND DETECT?(5A)GAMMA
L4            1 S L3 AND COD?(3A)(APERTUR? OR MASK)
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=> d l2 1-3

1. 5,308,986, May 3, 1994, High efficiency, high resolution, real-time radiographic imaging system; James K. Walker, **250/370.11**, 367, 368; 385/143, 145 [IMAGE AVAILABLE]

2. 4,987,307, Jan. 22, 1991, Intrabuccal detector for X-ray Apparatus; Giorgio Rizzo, et al., 250/368, 370.09, **370.11**; 378/191 [IMAGE AVAILABLE]

3. 4,870,279, Sep. 26, 1989, High resolution X-ray detector; Michael K. Cueman, et al., 250/368, 366, 367, 370.09, **370.11** [IMAGE AVAILABLE]

=> d l3 1-6

1. 5,308,986, May 3, 1994, High efficiency, high resolution, real-time radiographic imaging system; James K. Walker, 250/370.11, 367, 368; 385/143, 145 [IMAGE AVAILABLE]

2. 5,150,394, Sep. 22, 1992, Dual-energy system for quantitative radiographic imaging; Andrew Karellas, 378/62; 250/252.1, 368, 370.09, 385.1, 580; 378/19, 54, 98.9, 207 [IMAGE AVAILABLE]

3. 5,103,099, Apr. 7, 1992, Device for linear detection of radiation; Michel Bourdinaud, et al., 250/368, 487.1 [IMAGE AVAILABLE]

4. 5,012,499, Apr. 30, 1991, .**gamma**.-ray **detecting** device using dislocation-free crystal; Victor Vali, et al., 378/84, 145 [IMAGE AVAILABLE]

5. 4,864,140, Sep. 5, 1989, Coincidence detection system for positron emission tomography; W. Leslie Rogers, et al., 250/369, 363.03, 366 [IMAGE AVAILABLE]

6. 4,471,378, Sep. 11, 1984, Light and particle image intensifier; Sing Tai Ng, 348/162, 164, 207, 325; 378/98.7 [IMAGE AVAILABLE]

=> d l4

1. 5,012,499, Apr. 30, 1991, .**gamma**.-ray **detecting** device using dislocation-free crystal; Victor Vali, et al., 378/84, 145 [IMAGE AVAILABLE]

=> d kwic l4

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US PAT NO:      5,012,499 [IMAGE AVAILABLE]            L4: 1 of 1
TITLE:          .**gamma**.-ray **detecting** device using
                  dislocation-free crystal
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SUMMARY:
BSUM(3)
The . . . astronomical objects is a relatively recent discovery in scientific history. This is primarily due to the high absorption rate of .**gamma**.-rays by the atmosphere, whereby **detection** of such .**gamma**.-ray emitting sources can only be performed from high altitude observatories such as balloon or satellite-borne telescopes. Gamma ray telescopes have. . . grazing-incidence .gamma.-ray telescopes substantially ineffective, the upper energy level for such instruments being typically on the order of 40 keV. **Coded** **aperture** telescopes can extend the observation region to much higher energies, on the order of 1000 keV. However, no conventional high. . .

SUMMARY:
BSUM(5)
Therefore, there has been a need in the art for an .**gamma**.-ray **detector** capable of **detecting** and resolving high energy .**gamma**.-rays up to 10-20 MeV. There has also been a need for an .gamma.-ray imaging system that is capable of examining. . .
SUMMARY:
BSUM(7)
Broadly, the present invention provides a .**gamma**.-ray or x-ray **detector** or collimator that comprises a dislocation-free crystal. Typical presently available dislocation-free crystals are silicon and germanium. An active shield employed. . . the crystal. A detector is disposed adjacent the crystal to count .gamma.-rays transmitted by the crystal and hence provide for **detection** of .**gamma**.-rays emitted from the remote source. The .**gamma**.-ray **detector** or collimator of the present invention has angular resolution of at least one arc second and may have an effective. . .

CLMS(2)

2. The **detector** of claim 1 wherein the .**gamma**.-ray **detector** means comprises a .**gamma**.-ray **detecting** charge coupled device.